

Nutrient Broth (i23127)

Universal culture media for cultivating less fastidious microorganisms.

Industry: Clinical / Water / Food

Principles & Uses

Nutrient Broth is a fundamental culture medium with diverse applications in microbiology. Its versatility includes maintaining microorganisms, enriching fastidious species with serum or blood, and ensuring culture purity before biochemical or serological testing. Originally designed for water and wastewater examination, it serves as a non-selective medium for routine microbial cultivation.

This medium supports the growth of a broad spectrum of microorganisms that are not particularly fastidious, making it a valuable tool for various bacteriological analyses, including water, milk, dairy products, and clinical sample feces. Recommended by authoritative bodies like the American Public Health Association (APHA) and AOAC International, Nutrient Broth meets high standards in the field.

Peptone and yeast extract are key components, providing essential nitrogen compounds, carbon, vitamins, and trace elements required for bacterial growth. Sodium chloride plays a role in maintaining osmotic equilibrium, ensuring the medium's effectiveness in cultivating a wide range of microorganisms.

Composition (gr/L)

Peptone 5, Yeast Extract 2, Beef Extract 1, Sodium Chloride 5.

Final pH at 25°C 7.4 ± 0.2

Preparation from dehydrated Powder

Suspend 13 g of the powder in 1 Liter of distilled water. Mix thoroughly. Distribute into tubes or flasks. Autoclave at 121°C for 15 minutes.

Quality Control

Dehydrated Appearance: Medium tan, free-flowing, homogeneous.

Prepared Appearance: Light to medium amber, clear.

Reaction of 1.3% Solution at 25°C: pH 7.4 ± 0.2

Cultural Response

Cultural response was observed after incubation at 35 ± 2°C for 18-24 hours.

Organism (ATCC*)	Recovery
<i>Escherichia coli</i> (25922)	Good
<i>Enterococcus faecalis</i> (19433)	Good
<i>Staphylococcus aureus</i> (25923)	Good

*ATCC is a registered trade mark of the American Type Culture Collection.



Both *S. aureus* (left) and *E. coli* (right) exhibit turbidity due to bacterial growth.

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.